

comprises a first semiconductor region of a first conductivity type with a first connection conductor forming a collector region of a bipolar transistor, a second semiconductor region of a second conductivity type opposed to the first conductivity type with a second connection conductor forming a base region of the transistor, and a third semiconductor region of the first conductivity type with a third connection conductor forming an emitter region of the transistor; said method comprising:

forming the first semiconductor region of the first conductivity type;

forming the second semiconductor region on the first semiconductor region, the second semiconductor region having a partial region with a smaller flux of dopant atoms than other part of the second semiconductor region;

forming the third semiconductor region which lies recessed in the other part, and outside the partial region, of the second semiconductor region; and

providing first, second and third connection conductors to the first, second and third regions with a connection conductor respectively, wherein the second conductor is exclusively connected to the second semiconductor region and is adjacent to the partial region of the second semiconductor region.

7. (Twice Amended) A method as claimed in claim 6, characterized in that the partial region of the second semiconductor region is formed below the second connection conductor and is given a smaller thickness and a lower doping concentration than those in the other region.

8. (Twice Amended) A method as claimed in claim 6, characterized in that the partial region of the second semiconductor region is given a smaller thickness than that in the other region.

9. (Amended) A method as claimed in claim 6, characterized in that the partial region of the second semiconductor region is formed by means of ion implantation.

10. (Twice Amended) A method as claimed in claim 6, characterized in that a fourth semiconductor region of the first conductivity type is formed between the partial region of the second semiconductor region and the second connection conductor simultaneously with the third semiconductor region.

11. (Amended) A semiconductor device with a semiconductor body comprising:
a first semiconductor region of a first conductivity type which lies in the semiconductor body and is provided with a first connection conductor, forming a collector region of a bipolar transistor;

a second semiconductor region of a second conductivity type opposed to the first conductivity type which is present above the first semiconductor region and adjoining a surface of the semiconductor body, and which is provided with second connection conductor, forming a base region of the transistor; and

DI a third semiconductor region of the first conductivity type which lies recessed in the second semiconductor region and is provided with a third connection conductor, forming an emitter region of the transistor;

characterized in that a partial region of the second semiconductor region, which lies outside the third semiconductor region, has a smaller flux of dopant atoms than rest of the second semiconductor region, and said second connection conductor is exclusively connected to the second semiconductor region and is adjacent to said partial region.

12. (Previously Added) A semiconductor device as claimed in claim 11, characterized in that the partial region of the second semiconductor region has a lower doping concentration than other part of the second semiconductor region.

13. (Previously Added) A semiconductor device as claimed in 12, characterized in that the partial region of the second semiconductor region has a doping concentration substantially as

half as that of the rest of the second semiconductor region.

14. (Previously Added) A semiconductor device as claimed in claim 11, characterized in that the partial region of the second semiconductor region has a smaller thickness than the other part of the second semiconductor region.

15. (Previously Added) A semiconductor device as claimed in claim 14, characterized in that the partial region of the second semiconductor region has a thickness substantially as half as that of the other part of the second semiconductor region.

16. (Previously Added) A semiconductor device as claimed in claim 12, characterized in that the partial region of the second semiconductor region has a smaller thickness than the other part of the second semiconductor region.

21 17. (Previously Added) A semiconductor device as claimed in claim 11, characterized in that the partial region of the second semiconductor region is present below the second connection conductor.

18. (Previously Added) A semiconductor device as claimed in claim 11, characterized in that the second connection conductor is exclusively connected to the second semiconductor region for the purpose of preventing a saturation of the transistor.

19. (Previously Added) A semiconductor device as claimed in claim 11, further comprising a fourth semiconductor region of the first conductivity type which is present between the partial region of the second semiconductor region and the second connection conductor.

20. (Previously Added) A semiconductor device as claimed in claim 19, characterized in that the fourth semiconductor region has the same thickness and doping concentration as the third semiconductor region.
